



PUBLIC NOTICE

**U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT**

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**APPLICATION FOR PERMIT
Sand and Warm Creeks Confluence Improvements Project**

Public Notice/Application No.: SPL-2016-00203-SLP

Project: Sand Creek and Warm Creek Confluence Improvements Project

Comment Period: May 18, 2017 through June 17, 2017

Project Manager: Shannon Pankratz; (213) 452-3412; Shannon.L.Pankratz@usace.army.mil

Applicant

Harold Zamora
San Bernardino County Dept of Public Works
Environmental Management Division
825 East Third Street
San Bernardino, California 92415

Contact

Nancy Sansonetti
San Bernardino County Dept of Public Works
Environmental Management Division
825 East Third Street
San Bernardino, California 92415

Location

The project is located in Sand Creek and Warm Creek, within the city of San Bernardino, San Bernardino County, CA (latitude/longitude: 34.123188 N, -117.229534 W).

Activity

The applicant proposes to convert approximately 2692 linear feet of the Sand Creek and Warm Creek from open, primarily soft-bottomed trapezoidal channels with earthen side slopes containing some revetment fencing, riprap and mixed rock rubble to open, trapezoidal channels with ungrouted rock and four grouted rock drop structures comprising all of the channel bottoms and ungrouted rock on all of the side slopes (Figures 1-6). In total the proposed project would permanently impact 1.34 acre and temporarily impact 0.18 acre of non-wetland and wetland Waters of the United States (WoUS) for the purpose of providing 100-year flood risk management protection. For more information see Additional Information section below.

Interested parties are hereby notified an application has been received for a Department of the Army permit for the activity described herein and shown on the attached drawings. We invite you to review today's public notice and provide views on the proposed work. By providing substantive, site-specific comments to the Corps Regulatory Division, you provide information that supports the Corps' decision-making process. All comments received during the comment period become part of the record and will be considered in the decision. This permit will be issued, issued with special conditions, or denied under Section 404 of the Clean Water Act. Comments should be mailed to:

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS
REGULATORY DIVISION
ATTN: Shannon Pankratz
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CALIFORNIA 90017

Alternatively, comments can be sent electronically to: Shannon.L.Pankratz@usace.army.mil.

The mission of the U.S. Army Corps of Engineers Regulatory Program is to protect the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands. The Regulatory Program in the Los Angeles District is executed to protect aquatic resources by developing and implementing short- and long-term initiatives to improve regulatory products, processes, program transparency, and customer feedback considering current staffing levels and historical funding trends.

Corps permits are necessary for any work, including construction and dredging, in the Nation's navigable water and their tributary waters. The Corps balances the reasonably foreseeable benefits and detriments of proposed projects, and makes permit decisions that recognize the essential values of the Nation's aquatic ecosystems to the general public, as well as the property rights of private citizens who want to use their land. The Corps strives to make its permit decisions in a timely manner that minimizes impacts to the regulated public.

During the permit process, the Corps considers the views of other Federal, state and local agencies, interest groups, and the general public. The results of this careful public interest review are fair and equitable decisions that allow reasonable use of private property, infrastructure development, and growth of the economy, while offsetting the authorized impacts to the waters of the United States. The permit review process serves to first avoid and then minimize adverse effects of projects on aquatic resources to the maximum practicable extent. Any remaining unavoidable adverse impacts to the aquatic environment are offset by compensatory mitigation requirements, which may include restoration, enhancement, establishment, and/or preservation of aquatic ecosystem system functions and services.

Evaluation Factors

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof. Factors that will be considered include conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people. In addition, if the proposal would discharge dredged or fill material, the evaluation of the activity will include application of the EPA Guidelines (40 CFR Part 230) as required by Section 404 (b)(1) of the Clean Water Act.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Preliminary Review of Selected Factors

EIS Determination- A preliminary determination has been made an environmental impact statement is not required for the proposed work.

Water Quality- The applicant is required to obtain water quality certification, under Section 401 of the Clean Water Act, from the California Regional Water Quality Control Board. Section 401 requires any applicant for an individual Section 404 permit provide proof of water quality certification to the Corps of Engineers prior to permit issuance.

Coastal Zone Management- This project is located outside the coastal zone and preliminary review indicates it would not affect coastal zone resources. After a review of the comments received on this public notice and in consultation with the California Coastal Commission, the Corps will make a final determination of whether this project affects coastal zone resources after review of the comments received on this Public Notice.

Essential Fish Habitat- No Essential Fish Habitat (EFH), as defined by the Magnuson-Stevens Fishery Conservation and Management Act, occurs within the project area and no EFH is affected by the proposed project.

Cultural Resources- The applicant has submitted a Cultural Resources Assessment, dated October 2015. This assessment included a records search and field survey of the project site conducted in September 2015. No cultural resources were identified on the project site through the records search or during the field surveys. The National Register of Historic Places (NHRP) lists no properties within the project boundaries. The Native American Heritage Commission (NAHC) performed a Sacred Land Search for the area of potential effect, and the record search did not indicate the presence of Native American resources in the area that may be impacted by the project. This review constitutes the extent of cultural resources investigations by the District Engineer, and he is otherwise unaware of the presence of such resources.

Endangered Species- Preliminary determinations indicate the proposed activity would not affect federally-listed endangered or threatened species, or their critical habitat. Therefore, informal or formal consultation under Section 7 of the Endangered Species Act does not appear to be required at this time.

Public Hearing- Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearing shall state with particularity the reasons for holding a public hearing.

Proposed Activity for Which a Permit is Required

Basic Project Purpose- The basic project purpose comprises the fundamental, essential, or irreducible purpose of the proposed project, and is used by the Corps to determine whether the applicant's project is water dependent (i.e., requires access or proximity to or siting within the special aquatic site to fulfill its basic purpose). Establishment of the basic project purpose is necessary only when the proposed activity would discharge dredged or fill material into a special aquatic site (e.g., wetlands, pool and riffle complex, mudflats, coral reefs). The basic project purpose for the proposed project is to provide 100-year flood risk management protection. The project is water dependent.

Overall Project Purpose- The overall project purpose serves as the basis for the Corps' 404(b)(1) alternatives analysis and is determined by further defining the basic project purpose in a manner that more specifically describes the applicant's goals for the project, and which allows a reasonable range of alternatives to be analyzed. The overall project purpose for the proposed project is to prevent erosion for up to the 100-year flood risk of the Sand and Warm Creeks confluence area.

Additional Project Information

Baseline information- The project site is located along the confluence segments of the Sand and Warm Creek channels, westerly of Victoria Avenue and southerly of Pacific Avenue. Surrounding land use consists of a developed mixed use urban and residential corridor. Currently, Warm and Sand Creeks are graded and maintained soft-bottom trapezoidal channels, with some invert and side slope areas containing revetment fencing, gabions and riprap. The confluence area of the channel segments is experiencing high flow velocities and erosion due to the combination of 90-degree bend in Sand Creek and hydrology inputs from the developed surrounding watershed.

Helix Environmental Planning conducted a Jurisdictional Delineation Report to determine the amount of waters of the United States on the project site (Figure 3). A total of approximately 1.42 acre and 0.10 acre of non-wetland and wetland WoUS, respectively, are located within the project area. The majority of Sand and Warm Creeks are unvegetated, with limited areas containing primarily non-native species, including scattered Mexican fan palm (*Washingtonia robusta*) juveniles and saplings, castorbean (*Ricinus communis*), and Russian thistle (*Salsola tragus*). The emergent wetlands present are within the channel bottom mainly along the eastern extent of Warm Creek, also consisting primarily of non-native species. Dominant vegetation associated with the wetlands includes Mexican fan palm (*Washingtonia robusta*, FACW), southern cattail (*Typha domingensis*, OBL), castor bean (*Ricinus communis*, FACU), jungle rice (*Echinochloa colona*, FAC), water speedwell (*Veronica anagallis-aquatica*, OBL), and watercress (*Rorippa nasturtium-aquaticum*, OBL). Overall, the vegetation that is present within the channels is of low habitat quality, comprised of primarily non-native species, and affected by urban and storm event flows and maintenance activities. The surrounding area outside of the channels and surrounding dirt service roads is dominated by upland, non-native ruderal species, including Bermuda grass (*Cynodon dactylon*), cheatgrass (*Bromus tectorum*), cheese weed (*Malvella leprosa*), knotgrass (*Polygonum aviculare*), Russian thistle, sow thistle (*Sonchus asper*), and common vetch (*Vicia sativa*) (Figure 4).

Project description- The proposed project would improve the Sand Creek and Warm Creek confluence, located westerly of Victoria Avenue and southerly of Pacific Avenue. The channel construction limits extend approximately 950 feet from the point of confluence upstream on Sand Creek, approximately 1056 feet upstream on Upper Warm Creek, and approximately 686 feet downstream from the point of confluence on Upper Warm Creek. The main channel would be configured as a trapezoidal ungrouted rock lined channel, incorporating several grouted drop structures, with a base width of 30 feet to 50 feet, and 2 horizontal to 1 vertical (2H:1V) side slopes.

The alignment of Sand Creek would be modified to provide curvature less than 90-degrees, reducing the flow forces, velocities and superelevation depths on the outside of the stream curve. Upstream of the confluence, Upper Warm Creek continues as a much smaller channel. It would be modified to a trapezoidal ungrouted rock lined channel, with a base width of 12 feet, a depth of 13.5 feet, and mainly 1.5 horizontal to 1 vertical (1.5H:1V) side slopes, with the right side slope at 2 horizontal to 1 vertical (2H:1V) for some length. There would be grouted rock slope protection in the vicinity of the drop structures and at the access ramp surfaces, and placement at other locations as required by velocities. The project would also include access roads and ramps, side drain relocations, and other appurtenant work. At the existing grouted rock channel at the upstream end of Upper Warm Creek, the existing grouted rock invert would be replaced with a concrete invert. Graded earth transitions to the existing earth channels would be located at the upstream and downstream ends of the main channel. The project would include armoring and protection of an existing sewer line beneath one of the proposed grouted rock drop structures. Lastly, native vegetation would be installed in the project area post-construction, both within and outside of the improved channel banks (Figure 6).

Construction of the project is estimated to be completed over a period of 1 year. The applicant has stated the flood control improvements are designed for 100-year storm events (5374 cfs on Sand Creek, 872 cfs on Upper Warm Creek, 5668 cfs on Warm Creek downstream of the confluence), and would reduce/control flow velocities and erosion within both these channel segments and downstream of the confluence.

The proposed project would permanently impact approximately 1.30 acre and 0.04 acre of non-wetland and wetland WoUS, respectively. The proposed project would also temporarily impact 0.12 acre and 0.06 acre of non-wetland and wetland WoUS, respectively (Figure 5).

Proposed Mitigation– The proposed mitigation may change as a result of comments received in response to this public notice, the applicant's response to those comments, and/or the need for the project to comply with the 404(b)(1) Guidelines. In consideration of the above, the proposed mitigation sequence (avoidance/minimization/compensation), as applied to the proposed project is summarized below:

Avoidance: Due to the limited size of the project area, avoidance of impacts to WoUS is not possible.

Minimization: The applicant has reduced impacts to WoUS by designing the channel configurations to exclude concrete-lined alternatives and limiting areas of grouted rock within the channel invert and side slopes.

The applicant has also proposed the following construction-related Best Management Practices (BMPs) to be included within a Storm Water Pollution Prevention Plan, such as:

- Use of gravel basins, gravel bag inlet protection, fiber rolls, mulching, silt fencing for onsite sediment control and energy dissipation.
- Use of designated maintenance and storage equipment areas outside of waters.

Compensation: The applicant has not proposed compensatory mitigation.

Proposed Special Conditions: No special conditions are proposed at this time.

For additional information please call Shannon Pankratz of my staff at (213) 452-3412 or via e-mail at Shannon.L.Pankratz@usace.army.mil. This public notice is issued by the Chief, Regulatory Division.



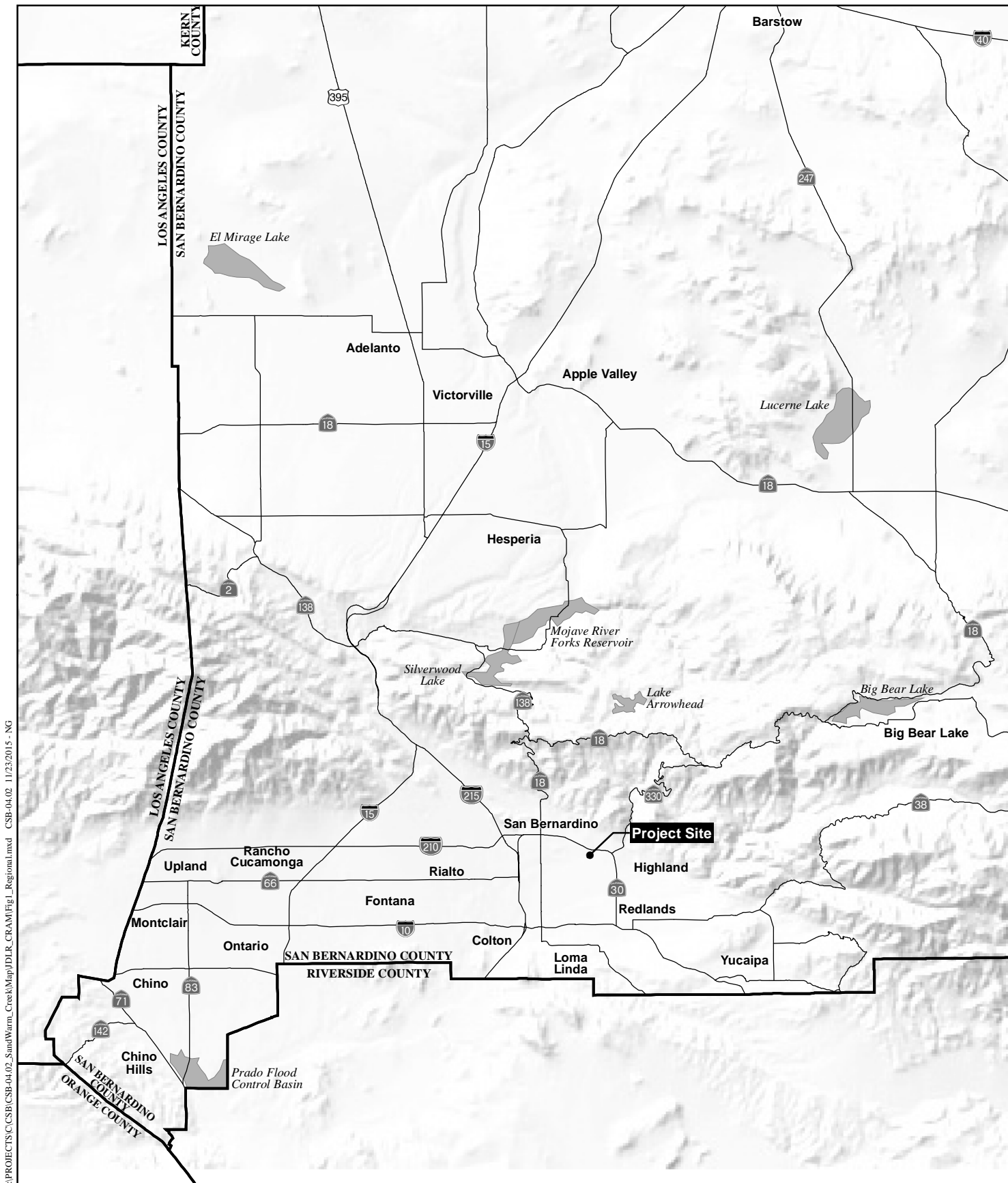
Regulatory Program Goals:

- To provide strong protection of the nation's aquatic environment, including wetlands.
- To ensure the Corps provides the regulated public with fair and reasonable decisions.
- To enhance the efficiency of the Corps' administration of its regulatory program.

**DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS**

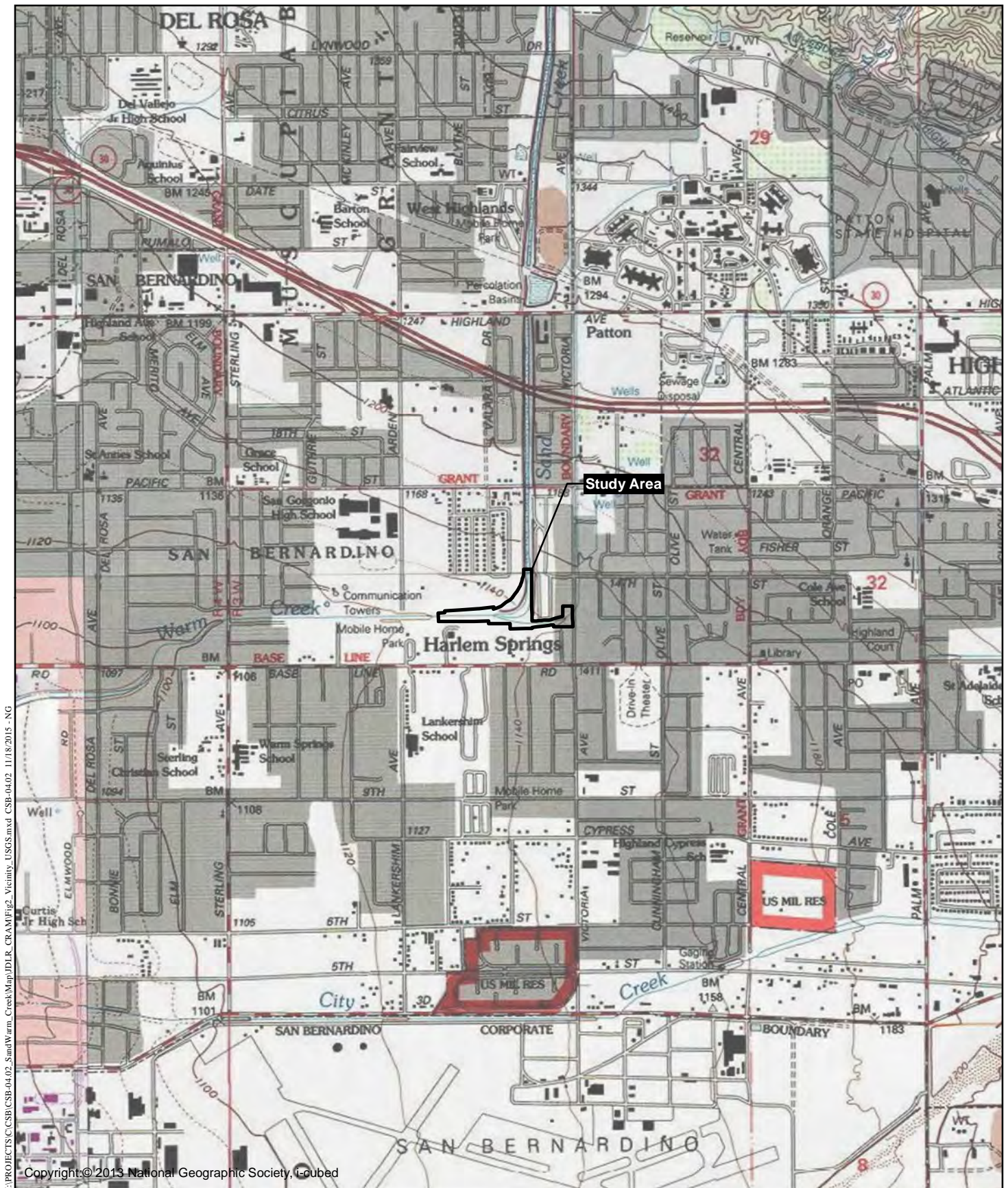
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LOS ANGELES, CALIFORNIA 90017

WWW.SPL.USACE.ARMY.MIL/MISSIONS/REGULATORY



Regional Location

SAND CREEK / WARM CREEK CONFLUENCE



Project Vicinity Map (USGS Topography)

SAND CREEK / WARM CREEK CONFLUENCE

JURISDICTIONAL WATERS OF THE U.S. AND STATE (AS REGULATED BY USACE, CDFW AND RWQCB)

- UNVEGETATED OTHER WATERS (OHWM) (1.42 AC)
- FRESHWATER MARSH (RIVERINE) WETLAND (0.09 AC)
- FRESHWATER MARSH (PALUSTRINE) WETLAND (0.01 AC)
- EXISTING UNCONCRETED ROCK RIP-RAP 0.63 AC
- EXISTING CONCRETED ROCK RIP-RAP

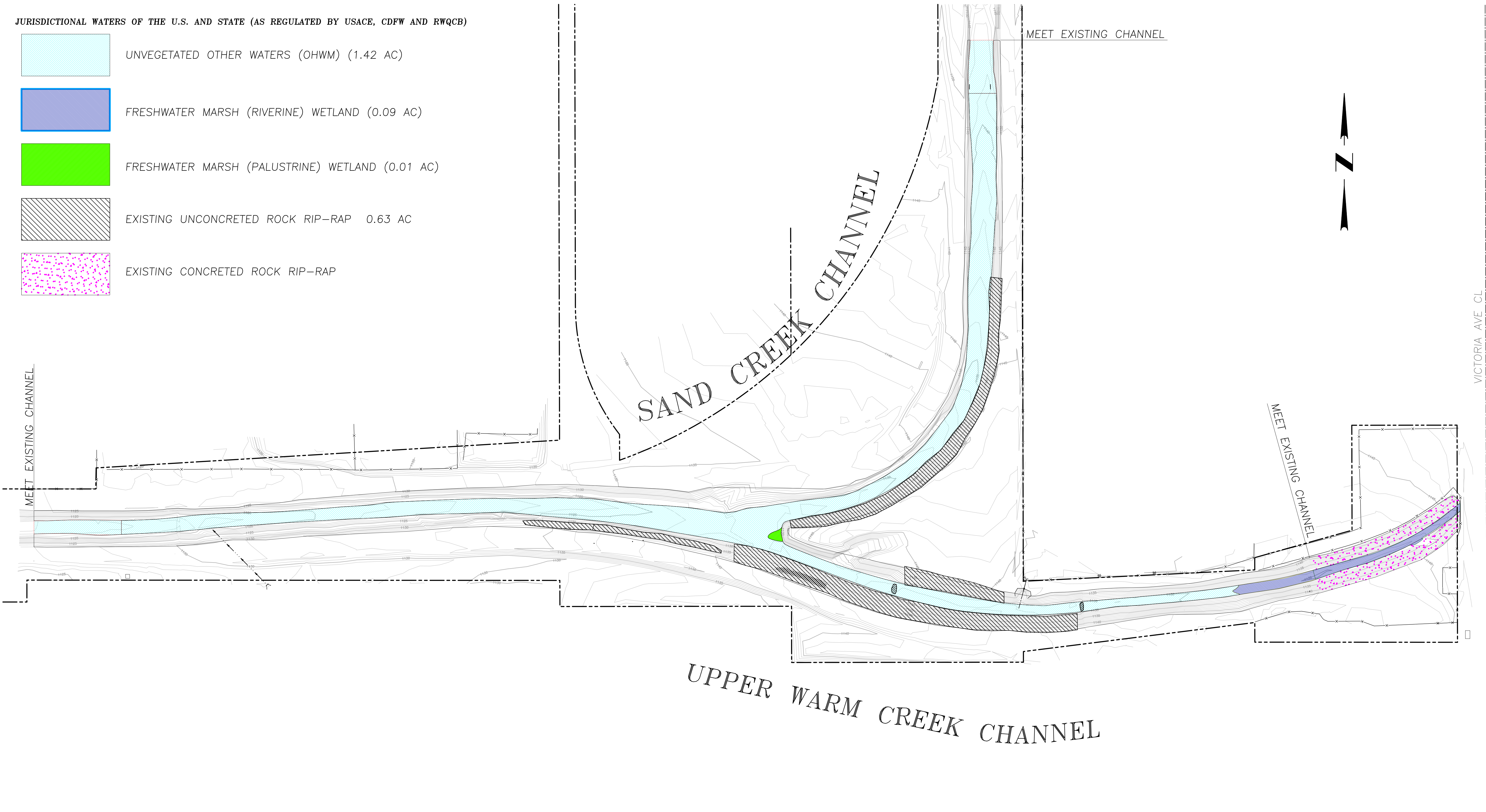


Figure 3.
Jurisdictional Waters of the U.S.



Underground Service Alert
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1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG



REVISIONS			
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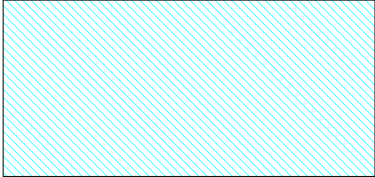
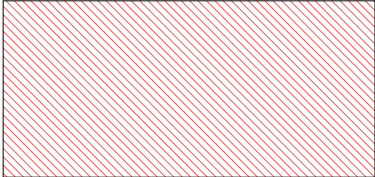
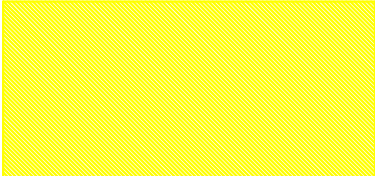
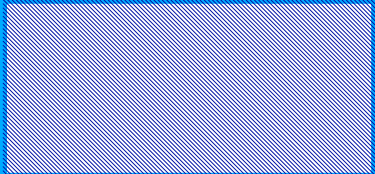
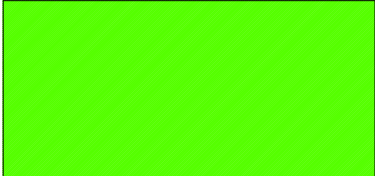
SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT

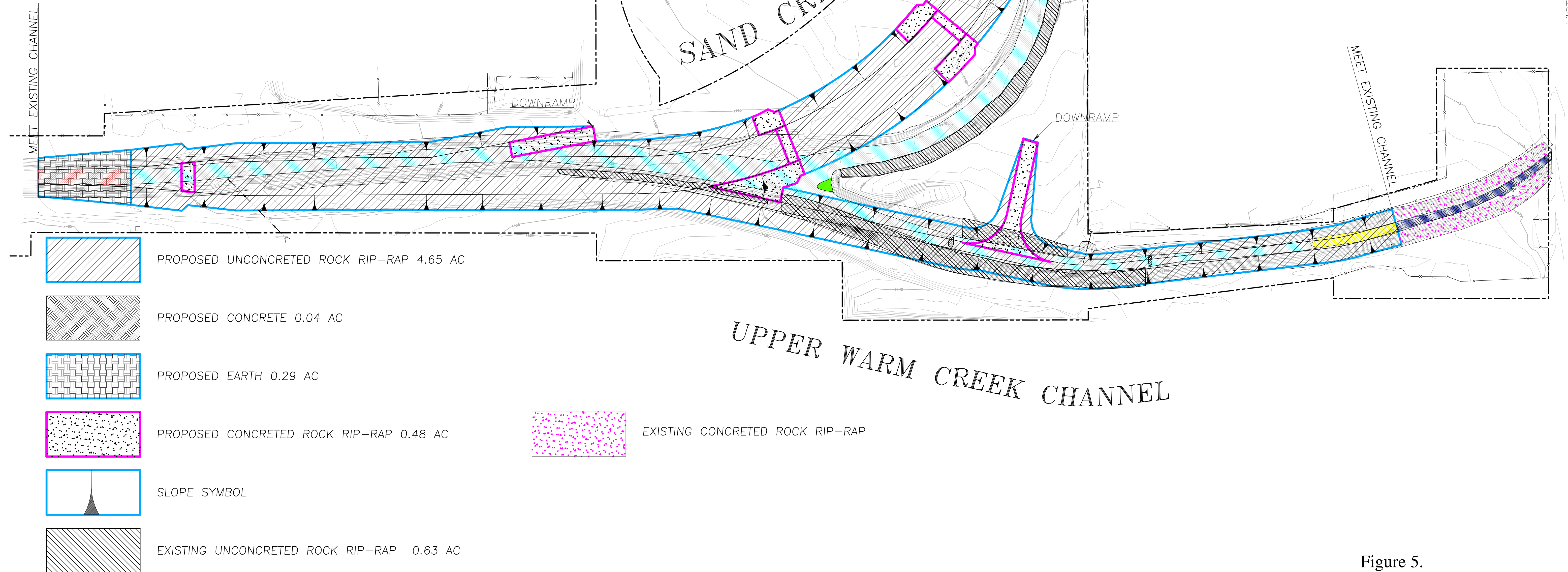
UPPER WARM CREEK SYSTEM
SAND CREEK/WARM CREEK
CONFLUENCE
UPPER WARM & SAND CREEK:
PROPOSED EXISTING MAP
CHANNEL AREA

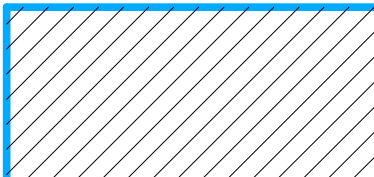
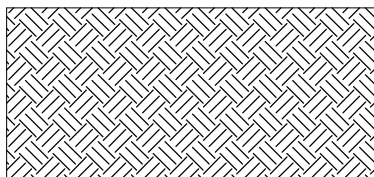
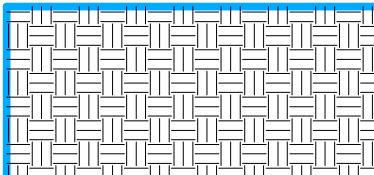

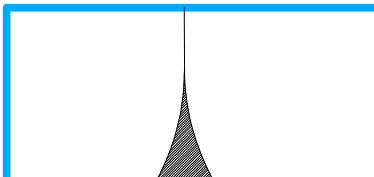
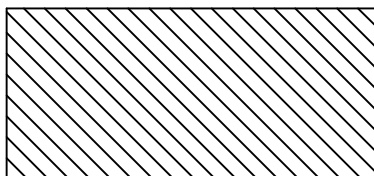
DATE	SCALE	FILE NO.	SHEET. NO.
Dec 14, 2016	AS SHOWN	2-501-	



JURISDICTIONAL WATERS OF THE U.S. AND STATE (AS REGULATED BY USACE, CDFW AND RWQCB)

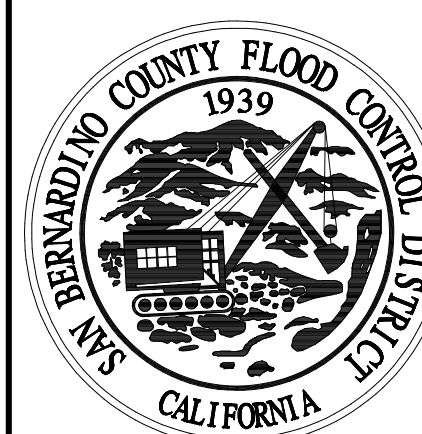
-  PERMANENT IMPACT UNVEGETATED OTHER WATERS (OHWM) (1.30 AC)
-  TEMPORARY IMPACT UNVEGETATED OTHER WATERS (OHWM) (0.12 AC)
-  PERMANENT IMPACT FRESHWATER MARSH (RIVERINE) WETLAND (0.03 AC)
-  TEMPORARY IMPACT FRESHWATER MARSH (RIVERINE) WETLAND (0.06 AC)
-  PERMANENT IMPACT FRESHWATER MARSH (PALUSTRINE) WETLAND (0.01 AC)



-  PROPOSED UNCONCRETED ROCK RIP-RAP 4.65 AC
-  PROPOSED CONCRETE 0.04 AC
-  PROPOSED EARTH 0.29 AC
-  PROPOSED CONCRETED ROCK RIP-RAP 0.48 AC
-  SLOPE SYMBOL
-  EXISTING UNCONCRETED ROCK RIP-RAP 0.63 AC

-  EXISTING CONCRETED ROCK RIP-RAP

Figure 5.
Impacts to Waters of the U.S.



REVISIONS			
MARK	DATE	DESCRIPTION	BY:

SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT

UPPER WARM CREEK SYSTEM			
SAND CREEK/WARM CREEK CONFLUENCE			
UPPER WARM & SAND CREEK: PROPOSED ROCK IMPACT MAP CHANNEL AREA			
DATE Dec 5, 2016	SCALE AS SHOWN	FILE NO. 2-501-	SHEET. NO.



EXAMPLE: CONCRETED RIP-RAP INVERT WITH LOOSE SILT SEDIMENT

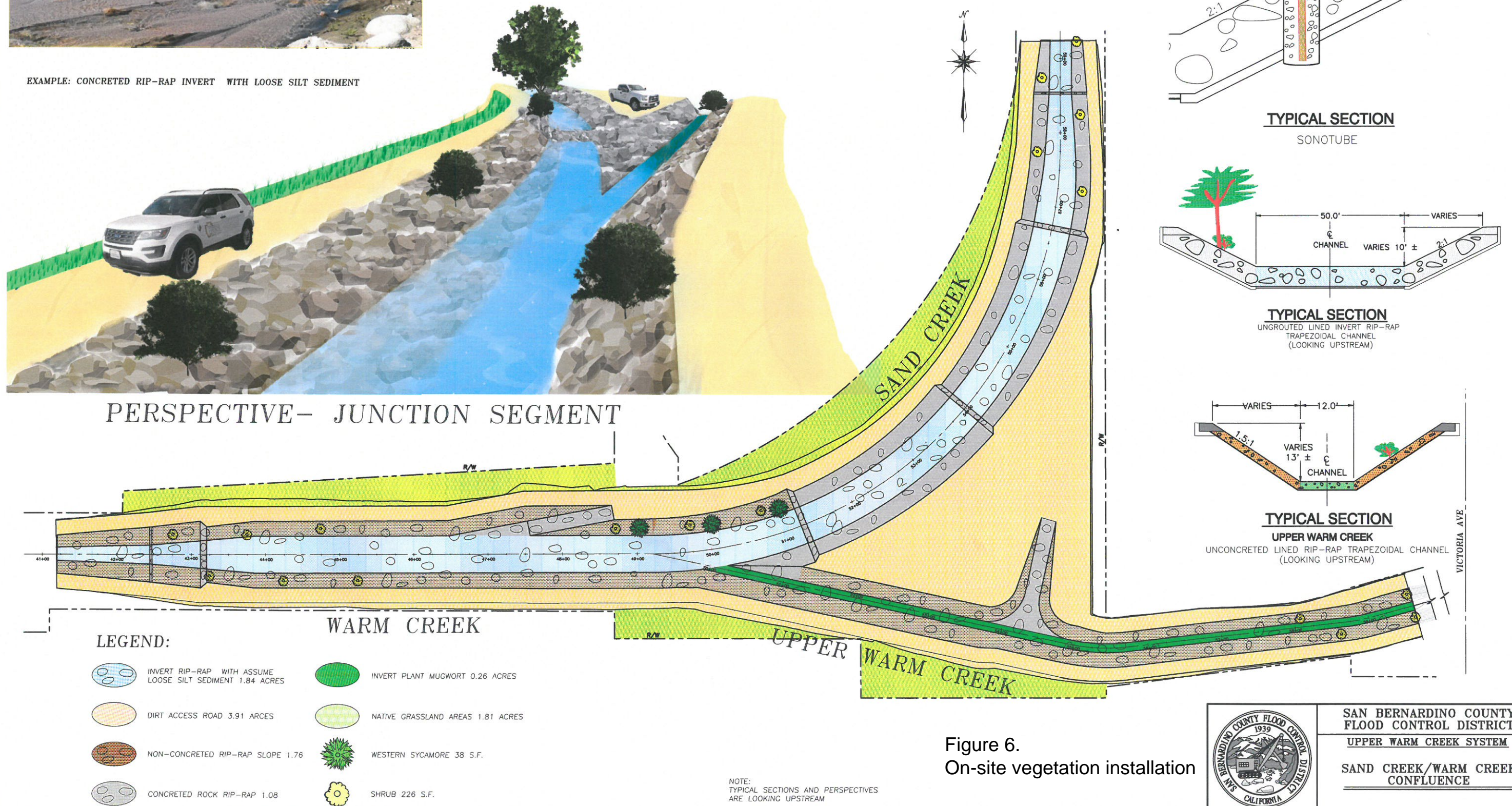


Figure 6.
On-site vegetation installation